

IN THE CLAIMS:

Please cancel Claims 3 and 7-9 without prejudice to or disclaimer of the subject matter presented therein.

Please amend Claims 1, 4-6 and 13 as follows.

1. (Currently Amended) An image processing apparatus for generating information that allows to detect a position of tampering for an original image which is formed of first and second regions, comprising:

~~feature-binary~~ image generation means for generating a ~~feature-binary~~ image of the ~~original image~~ the first region using an image of the first region;

watermark information generation means for generating watermark information which contains the ~~feature-binary~~ image and ~~additional information associated with the original image~~;

error-correction encoding means for generating error-correction encoded watermark information by making error-correction encoding of the watermark information; and

reconstructing means for reconstructing the error-correction encoded watermark information by varying an arrangement order of each bit which forms the error-correction encoded watermark information; and

output means for outputting, as an output image, an image formed by replacing image information of the second region in the original image ~~by-with~~ the ~~error-correction-encoded~~ watermark information reconstructed by said reconstructing means.

2. (Original) The apparatus according to claim 1, further comprising:

encryption means for encrypting the watermark information generated by said watermark information generation means, and

wherein said error-correction encoding means makes error-correction encoding of the watermark information encrypted by said encryption means.

3. (Canceled)

4. (Currently Amended) The apparatus according to claim 1, further comprising:
Hash value calculation means for calculating a Hash value using the image of the first region, and

wherein said watermark information generation means further stores data of the Hash value in the watermark information, as the additional information.

5. (Currently Amended) The apparatus according to claim 1, wherein the additional information associated with the original image contains a bit sequence used to check if the watermark information is normally decoded.

6. (Currently Amended) The apparatus according to claim 5, wherein the bit sequence is a Hash value for a part of the watermark information that contains at least the feature binary image.

7-9. (Canceled)

10. (Withdrawn) An image processing apparatus for detecting a position of tampering in a tampered image which is formed of first and second regions, comprising:

error-correction decoding means for making error-correction decoding of an image based on the second region to reclaim watermark information which contains a feature image that represents a feature of the tampered image before tampering, and information associated with an image before tampering of the tampered image;

feature image generation means for generating a feature image of the tampered image using an image of the first region; and

tampered position notifying means for notifying the position of tampering in the tampered image using the feature image which is contained in the watermark information and represents the feature of the tampered image before tampering, and the feature image of the tampered image.

11. (Withdrawn) An image processing apparatus for generating information that allows to detect a position of tampering for an original image which is formed of first and second regions, comprising:

encryption means for encrypting watermark information, which is generated in advance, to generate encrypted watermark information;

error-correction encoding means for making error-correction encoding of the encrypted watermark information to generate error-correction encoded encrypted watermark information; and

output means for outputting, as an output image, an image formed by replacing image information of the second region in the original image by the error-correction encoded encrypted watermark information.

12. (Withdrawn) An image processing apparatus for detecting a position of tampering in a tampered image which is formed of first and second regions, comprising:

error-correction decoding means for making error-correction decoding of an image based on the second region to generate an error-corrected image based on the second region, so as to reclaim encrypted watermark information;

decryption means for decrypting the encrypted watermark information to reclaim watermark information;

watermark information verification means for verifying consistency of the watermark information; and

tampered position detection means for, when the watermark information meets the consistency, detecting a tampered position by comparing the image based on the second region and the error-corrected image based on the second region.

13. (Currently Amended) An image processing method for generating information that allows to detect a position of tampering for an original image which is formed of first and second regions, comprising:

a feature binary image generation step of generating a feature binary image of the original ~~image the first region~~ using an image of the first region;

a watermark information generation step of generating watermark information which contains the feature binary image and additional ~~information associated with the original image~~;

an error-correction encoding step of generating error-correction encoded watermark information by making error-correction encoding of the watermark information; and

a reconstructing step of reconstructing the error-correction encoded watermark information by varying an arrangement order of each bit which forms the error-correction encoded watermark information; and

an output step of outputting, as an output image, an image formed by replacing image information of the second region in the original image by with ~~the error-correction encoded watermark information~~ reconstructed in said reconstructing step.

14. (Withdrawn) An image processing method for detecting a position of tampering in a tampered image which is formed of first and second regions, comprising:

an error-correction decoding step of making error-correction decoding of an image based on the second region to reclaim watermark information which contains a feature image that represents a feature of the tampered image before tampering, and information associated with an image before tampering of the tampered image;

a feature image generation step of generating a feature image of the tampered image using an image of the first region; and

a tampered position notifying step of notifying the position of tampering in the tampered image using the feature image which is contained in the watermark information and represents the feature of the tampered image before tampering, and the feature image of the tampered image.

15. (Withdrawn) An image processing method for generating information that allows to detect a position of tampering for an original image which is formed of first and second regions, comprising:

an encryption step of encrypting watermark information, which is generated in advance, to generate encrypted watermark information;

an error-correction encoding step of making error-correction encoding of the encrypted watermark information to generate error-correction encoded encrypted watermark information; and

an output step of outputting, as an output image, an image formed by replacing image information of the second region in the original image by the error-correction encoded encrypted watermark information.

16. (Withdrawn) An image processing method for detecting a position of tampering in a tampered image which is formed of first and second regions, comprising:

an error-correction decoding step of making error-correction decoding of an image based on the second region to generate an error-corrected image based on the second region, so as to reclaim encrypted watermark information;

a decryption step of decrypting the encrypted watermark information to reclaim watermark information;

a watermark information verification step of verifying consistency of the watermark information; and

a tampered position detection step of detecting, when the watermark information meets the consistency, a tampered position by comparing the image based on the second region and the error-corrected image based on the second region.

17. (Original) A program for making a computer function as an image processing apparatus of claim 1.

18. (Original) A program for making a computer implement an image processing method of claim 13.

19. (Original) A computer readable storage medium storing a program of claim 17.

20. (Withdrawn) A computer readable storage medium storing a program of claim 18.